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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/825,499	04/03/2001	Gregory A. Peterson	EDAC:013(10793.0013.NPUS0	2017

7590 08/21/2003

Thomas V. Miller
Howrey Simon Arnold & White, LLP
P.O. Box 4433
Houston, TX 77210-4433

EXAMINER

PAIK, SANG YEOP

ART UNIT	PAPER NUMBER
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3742

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DATE MAILED: 08/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/825,499

Applicant(s)

PETERSON ET AL.

Examiner

Sang Y Paik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7,13 and 20-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7,13,20-26 and 32-37 is/are allowed.
- 6) ☒ Claim(s) 27-31 and 38-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gandre et al (US 5,828,549) in view of Welsh (US 2,930,405) or Doble (US 1,519,673).

Gandre et al show a heat sink having a tubular body with a substantially flat exterior surface, a plurality of internal fins extending from the interior surface of the heat sink, a plurality of external fins extending from the exterior surface, a fan positioned adjacent to an open end of the tubular body, and a circuit board attached to the tubular body to cool down the circuit board. However, Gandre et al do not show that the fins have varying lengths that are symmetric around the center line of the tubular body.

Welsh and Doble show it is known in the art to provide internally extending symmetrical fins having varying lengths to effectively transfer heat. In view of Welsh or Doble, it would have been obvious to one of ordinary skill in the art to adapt Gandre et al with fins having varying lengths to improve the heat exchange between the fins and thus improve the heat transfer via fins. With respect to claim 29, it would have been obvious to further modify the length of the fins having the center fins longer than the edge fins or any other arrangement since it is taught by Welsh that fins having varying size would provide excellent heat exchange.

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3. Claims 38-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gandre et al in view of Welsh or Doble as applied to claims 27-31 above, and further in view of Campbell (US 6,339,212).

Gandre et al in view of Welsh or Doble discloses the heat sink claimed except using the heat sink with a cooktop device.

Campbell shows a cooktop having a cooking plate, a plurality of heating elements, a control house or box where the control box is cooled by a heat sink having a plurality of fins.

In view of Campbell, it would have been obvious to one of ordinary skill in the art to adapt Gandre, as modified by Welsh or Doble, with the cooktop apparatus to make use of the heat sink structure in a cooktop to enhance the heat exchange transfer from the control box to the heat exchanger.

Allowable Subject Matter

4. Claims 7, 13 20, 21-26 and 32-37 are allowed over the prior art of record.

Response to Arguments

5. Applicant's arguments with respect to claims 27-31 and 38-42 have been considered but are moot in view of the new ground(s) of rejection.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Y Paik whose telephone number is 703-308-1147. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0861.

S. Paik

Sang Y Paik
Primary Examiner
Art Unit 3742

syp